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REMARKS

The present Amendment amends claims 1, 3, 6, 8-10, 12, 13, 17, 19 and 20, leaves claims 4, 5, 7 and 14-16, 18 unchanged, cancels claims 2 and 11 and adds new claim 21. Therefore, the present application has pending claims 1, 3-10 and 12-21.

The present Preliminary Amendment is being filed as a result of several telephone interviews held with Examiner Willett in order to reach agreement regarding the distinguishing features of the present invention and how such distinguishing features distinguish over the prior art. Applicants' Attorney, the undersigned, wishes to thank Examiner Willett for the courtesy extended during the various telephone interviews.

During the telephone interviews, the distinguishing features of the present invention were discussed relative to the teachings of various references, particularly Infante (U.S. Patent Application Publication No. 2004/0078632).

It was noted during the discussions that Infante appears to disclose, for example, in Fig. 1 thereof a system in which loads are balanced among a plurality of paths 130AB, 132AB, 134AB and 136AB contained within a storage system having a plurality of host bus adapters (HBAs) 104, 106 and 108, a plurality of fibre channels switches 110, 112 and 114 each being connected to one of the HBAs 104, 106 and 108 and a plurality of disk drives 116, 118, 120 and 122 each being connected to at least two of the fibre channel switches 110, 112 and 114 by a plurality of paths 130AB, 132AB, 134AB and 136AB. It was further noted during the discussions that each of the HBAs 104, 106 and 108 of the storage system is connected to a driver

(failover/load balancing driver stack) 103 which is connected to a host system (server) 102. Thus, Infante merely teaches that load balancing is performed within a storage system on the paths 130AB, 132AB, 134AB and 136AB which connect the fibre channel switches 110, 112, and 114 to the disk drives 116, 118, 120 and 122.

Therefore, the paths 130AB, 132AB, 134AB and 136AB as taught by Infante are internal of a storage system and as such are not paths external of the storage system as in the present invention. Further Infante does not teach or suggest that the paths being external of the storage system is used to connect the storage system to another storage system or another device as in the present invention.

Still further, Infante does not teach or suggest that the ratios of the communications on the paths are dynamically changed based upon information regarding congestion of the paths as in the present invention.

Infante simply teaches that two levels of load balancing are provided, namely static load balancing and dynamic load balancing. According to Infante, the dynamic load balancing does not set a particular ratio as to how communications are to be conducted on the paths but merely changes a path being used for communication based upon a detected congestion condition. Static load balancing as taught by Infante does teach the use of ratios. However, the ratios as taught by Infante are not dynamically changed based upon congestion but are required to be changed by the system administrator/user.

Still further yet, the ratios as taught by Infante are ratios concerning communication paths internal of the storage system, not communication paths external of the storage system as in the present invention.

Based on the above, it was agreed during the telephone interviews that the claims should be amended to clarify the distinguishing features of the present invention as per the above and that once the claims have been amended in this manner the claims would overcome the teachings of Infante and any of the other references of the record.

Accordingly, the present Amendment amends the claims so as to more clearly recite that the paths are connected between storage systems or a computer and a storage system and that such paths are external of the storage systems or the computer and the storage system.

Further, amendments were made to the claims to more clearly define the predetermined ratio and that the predetermined ratio is changed depending upon detected conditions in the paths connected between and external of the first and second storage systems or a computer and storage system.

Thus, based on the above and the agreement reached during the telephone interviews, the features of the present invention as now recited in the presently amended claims are not taught or suggested by any of the references of record, particularly Infante whether taken individually or in combination with each other.

Therefore, the claims as amended in the present Amendment are allowable over the prior art of record. Accordingly, early allowance of the

present application based on the amended claims of the present Amendment  
is respectfully requested.

To the extent necessary, the applicants petition for an extension of time  
under 37 CFR 1.136. Please charge any shortage in fees due in connection  
with the filing of this paper, including extension of time fees, or credit any  
overpayment of fees, to the deposit account of MATTINGLY, STANGER,  
MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (TMI-5039).

Respectfully submitted,

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